

APPARATUS AND METHOD FOR ARGON PLASMA INDUCED ULTRAVIOLET LIGHT CURING STEP FOR INCREASING SILICON-CONTAINING PHOTORESIST SELECTIVITY

ABSTRACT OF THE DISCLOSURE

Provided is a method and apparatus for increasing an etching selectivity of photoresist material. An exemplary method initiates with providing a substrate with a developed photoresist layer. The developed photoresist layer on the substrate includes polymer chains containing silicon. Next, the substrate and developed photoresist layer are exposed to an ultraviolet (UV) light, where the UV light emanates from a UV generating agent. A portion of the developed photoresist layer is then converted to a hardened layer where the hardened layer is created by cross-linking the polymer chains containing silicon and the cross-linking is activated by the UV light. Next an etch may be performed on the substrate using the hardened layer.